## I. Amendments to the Specification

Please replace paragraphs [0017], [0018], [0023], [0025], [0027], [0031], [0032], [0033], [0034], and [0035] with the following amended paragraphs:

**[0017]** As shown by the partially assembled adjustment assembly 12 the bezel 14 includes a bracket 18 that rotatably receives the knob 16. The partially assembled adjustment assembly 12 has a first pair of contact members 26 including a first contact member 28 and a second contact member 30. The first and second contact members 28, 30 selectively engage a contact board 32 in order to form electrical connections. The contact board 32 may be a printed circuit board, but any appropriate device that permits engagement and disengagement of electrical connections may be used. The contact members 28, 30 are preferably comprised of a plastic material; in which case the contact members 28, 30 include an electrically conductive portion (not shown) in order to complete an electrical circuit within the ~~circuit~~ contact board 32. In one alternative, the contact members 28, 30 are comprised of an electrically conductive material in order to complete the electrical circuit. In another alternative, the contact members 28, 30 contact and move an electrically conductive bridging member (not shown) that completes the electrical circuit.

**[0018]** In the illustrated embodiment of Figure 1, each of the contact members 28, 30 is a generally resilient finger having a base



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portion 34, 36 at one end of the finger and a contact portion 38, 40 at the other end of finger. The base portions 34, 36 are connected to the bezel 14 and serve as the pivoting point for the respective ~~living hinges~~ contact members 28, 30. More specifically, the base portions 34, 36 are preferably living hinges permitting resilient rotation between the contact members 28, 30 and the bezel 14. In the illustrated embodiment of Figure 1, the bezel 14 and the contact members 28, 30 are formed from one unitary structure. The contact members 28, 30 could alternatively be connected to the bezel 14 via an appropriate fastener or adhesive. The contact portions 38, 40 of the ~~living hinges~~ contact members 28, 30 are near a free end of the contact members 28, 30 in order to freely pivot about the respective bases 34, 36.

**[0023]** The back end 44 of the knob 16 preferably defines a wave-shaped surface having a plurality of peaks 52 and troughs 54. The peaks 52 are defined as the portions of the protrusions 50 that are located furthest from the first end 42 of the knob 16 along a line parallel with the longitudinal axis 22, and the troughs 54 are defined as the areas between the peaks 52 and that are closest to the first end 42 of the knob 16 along a line parallel to the longitudinal axis 22. As shown in Figure 2, the wave-shaped surface of the ~~second~~ back end 44 is preferably defined by a sinusoidal function 56. This creates a consistent feel for the user during rotation of the knob ~~assembly 10~~ 16



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and such that each predetermined angle of rotation that the knob 16 is rotated will cause a signal to be sent to the controller.

**[0025]** As shown in Figure 2, the troughs 54 of the knob 16 preferably includes a hemispherical receptacle 63 that receives the respective projections 60, 62 when the peak 52 is located between the respective ~~living hinges~~ contact members 28, 30. The receptacle 63 may have any appropriate shape and may match the shape of the projections 60, 62. The hemispherical receptacles 63 may operate as reservoirs for grease and/or dirt in order to decrease the friction between the knob 16 and the contact members 28, 30.

**[0027]** During operation of the instrument panel 10, an electrical circuit in selective contact with the first ~~living hinge~~ contact member 28 is completed when one of the peaks 52 is aligned with the contact portion 38 of the first ~~living hinge~~ contact member 28, and the electrical circuit is not complete when one of the troughs 54 is aligned with the contact portion 38 of the ~~living hinge~~ contact member 28.

**[0031]** Finally, the contact surface distance 64 is preferably smaller than the wave length 58 so the controller can determine the direction that the knob 16 is being rotated based on the timing of the contact portions 38, 40 engaging the contact board 32. For example, when neither of the contact members 28, 30 are in contact with the



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contact board 32, one of the peaks 52 is located between the respective contact members 28, 30. Therefore, as the knob 16 is rotated, the peak 52 that was located between the contact members 28, 30 will contact one of the projections 60, 62 depending on the direction of the rotation. If the knob 16 is turned clockwise, then the peak 52 that was located between the respective contact members 28, 30 will first contact the projection 62 and the trailing peak 52b will subsequently contact the ~~protrusion~~ projection 60. Similarly, if the knob 16 is rotated in a counter-clockwise direction, the peak 52 will contact the projection 60 and the leading peak 52a will contact the projection 62. If the wave length 50 was the same distance as the contact surface distance 64, then the peak 52 will contact the projection 62 at the same time that the trailing peak 52b contacts the projection 60 a sequence, and therefore direction of rotation could not be deferred. Therefore, the wave length 58 and the contact surface distance 64 are preferably unequal.

**[0032]** Figure 3a shows the knob in a first position 80 where one of the peaks 52 is in aligned with the projection 74 of the third contact member in order to form a first electrical connection 82. Additionally, one of the troughs 54 is in aligned with the projection 60 on the first contact member 28, such that the first contact member 28 is separated a distance [[82]] 83 from the contact board 32 and an electrical connection is not completed.



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**[0033]** Figure 3b shows the knob 16 in a second position 86 where one of the peaks 52 is in aligned with the projection 60 of the first contact member [[58]] 28 in order to induce a second electrical connection 88 with the contact board 32. Additionally, one of the troughs 54 is in aligned with the projection 74 of the third contact member 68 such that the third contact member 68 is separated a distance [[82]] 83 from the contact board 32 and an electrical connection is not completed.

**[0034]** Figure 3c shows the knob 16 in a third position 90 where neither the first contact member 28 nor the third contact member 68 are in electrical connection with the contact board 32. The third position 90 is considered to be an equilibrium position because the projection 60 and the hemispherical receptacle 63 form a ~~matting~~ mating connection 92 and the projection 74 and the hemispherical receptacle 63 form a ~~matting~~ mating connection 92. The ~~matting~~ mating connections 92 act as an indexing means by providing a slight resistance to rotation of the knob 16 in order to indicate to the operator that the knob 16 is located at particular setting. This resistance or tactile indicia permits the operator to feel each setting or level of the adjustment assembly 12.



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**[0035]** In the third position 90, the respective contact members 28, 30, 68, 70 bias the knob 16 towards an equilibrium position. More specifically, the respective contact members 28, 30, 68, 70 are biased such as to move in direction away from the contact board 32 substantially parallel to the longitudinal axis 22, thus creating a spring force acting on the ~~second~~ back end 44 of the knob 16. When one of the peaks 52 is in contact with a respective contact member 28, 30, 68, 70 the spring force is greater due to the large deflection of the contact member 28, 30, 68, 70. Thus, the knob 16 becomes more difficult to rotate as one of the peaks 52 aligns with one of the contact members 28, 30, 68, 70. Additionally, the shape of the peaks 52 and troughs 54 may generate a rotational force perpendicular to the longitudinal axis 22 based on the angle of contact between the ~~second~~ back end 44 of the knob 16 and the respective contact member 28, 30, 68, 70. Therefore, the respective contact members 28, 30, 68, 70 will tend to rotate the knob 16 in a clockwise or a counter-clockwise direction and into the equilibrium position 90.



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